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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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EXAMINER	
LIU, BEN H	

ART UNIT	PAPER NUMBER
2609	

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Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No.	Applicant(s)	
	10/799,063	BRIDGELALL, RAJ	
	Examiner	Art Unit	
	Ben H. Liu	2609	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE *3* MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *11 March 2004*.

2a)☐ This action is **FINAL**. 2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-23* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1-23* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☒ Information Disclosure Statement(s) (PTO/SB/08) Paper No(s)/Mail Date *See Continuation Sheet*.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____ .
5) ☐ Notice of Informal Patent Application
6) ☐ Other: _____.

Continuation of Attachment(s) 3). Information Disclosure Statement(s) (PTO/SB/08), Paper No(s)/Mail Date :11 March, 2004 and 16 November, 2006..

DETAILED ACTION

Claim Objections

1. Claims 4 and 5 are objected to because of the following informalities:

In claim 4, it appears the phrase "the system of claim 3" in line 1 refers to "the apparatus of claim 1" recited in claim 3 line 1. If that is the case, it is suggested that the applicant change the phrase to "the system of claim 3." A similar problem exists in claim 5 line 1.

Appropriate correction is required.

Claim Rejections - 35 USC § 103

1. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

2. The factual inquiries set forth in *Graham* **v.** *John Deere Co.*, 383 U.S. 1, 148 USPQ 459 (1966), that are applied for establishing a background for determining obviousness under 35 U.S.C. 103(a) are summarized as follows:

1. Determining the scope and contents of the prior art.
2. Ascertaining the differences between the prior art and the claims at issue.
3. Resolving the level of ordinary skill in the pertinent art.
4. Considering objective evidence present in the application indicating obviousness or nonobviousness.

3. Claims 1-5 and 7-21 are rejected under 35 U.S.C. 103(a) as being unpatentable over Chadha (U.S. Patent Application Publication 2004/0176107) in view of Logan et al. (U.S. Patent 6,996,402).

For claims 1, 7, 12, and 17, Chadha discloses an apparatus and method for forming a Wireless Personal Area Network (WPAN) from a plurality of Personal Area Network (PAN) devices, comprising: a location determinator configured to determine a location for each of said plurality of PAN devices; a comparator coupled to the determinator and configured to compare said location for each of said plurality of PAN devices with a WPAN association criteria in order to determine an identification of each of said plurality of PAN devices that at least partially satisfy said WPAN criteria (see paragraph 6); and a communication link coupled to the comparator configured to transmit said identification of each of said plurality of PAN devices that at least partially satisfy said WPAN criteria to such devices (see paragraph 41).

For claim 2, Chadha discloses an apparatus for forming a Wireless Personal Area Network (WPAN) wherein the determinator determines the location of each of said plurality of PAN device as a function of time and the comparator selects those of said plurality of PAN devices that move substantially together and the communication link transmits the identification of the selected devices (see paragraph 33).

For claims 9 and 19, Chadha discloses a Wireless Personal Area Network (WPAN), wherein the WPAN association criteria employed by the base station include identifying a subset of the plurality of electronic devices that move as a group (see paragraph 33).

For claim 10, Chadha discloses a Wireless Personal Area Network (WPAN), wherein the plurality of electronic devices intercommunicate using a Bluetooth or Zigbee compliant communicator function (see paragraph 41).

For claims 1-5 and 7-21, Chadha discloses all the subject matter of the claimed invention with the following exceptions:

An apparatus for forming a Wireless Personal Area Network (WPAN) wherein the communication link comprises a main hub transceiver coupled to the determinator and a remote relay transceiver coupled to said plurality of PAN devices as recited in claim 3.

An apparatus for forming a Wireless Personal Area Network (WPAN) wherein the plurality of PAN devices intercommunicate using a first combination of data rate and signal power and the main hub and remote relay communicate using a second combination of data rate and signal power, different than the first combination as recited in claim 4.

An apparatus for forming a Wireless Personal Area Network (WPAN) wherein the first combination, relative to the second combination uses shorter range lower power signals, and the second combination, relative to the first combination, uses longer range higher power signals as recited in claim 5.

A Wireless Personal Area Network (WPAN) comprising a plurality of electronic devices each having a Radio Frequency Identification (RFID) tag function and a remote communication node wirelessly coupled to at least two of said plurality of electronic devices as recited in claim 7.

Wireless Personal Area Network (WPAN) wherein the base station comprises at least one transceiver and at least three receivers for determining the location of said plurality of electronic devices as recited in claim 8.

A Wireless Personal Area Network (WPAN) wherein the base station and the remote communication node intercommunicate using an 802.1 1 or Bluetooth or wireline communication arrangement as recited in claim 11.

The method for forming a Wireless Personal Area Network (WPAN), wherein prior to the transmitting step, forming an ad-hoc network of said plurality of PAN devices, intercommunicating with each other and with the base station as recited in claim 13.

The method for forming a Wireless Personal Area Network (WPAN), wherein the forming step employs the Bluetooth or Zigbee Standard as recited in claim 14.

The method for forming a Wireless Personal Area Network (WPAN), wherein the determining step comprises broadcasting a signal from a base station and detecting return signals from an RFID tag function associated with each of the plurality of PAN devices as recited in claim 15.

The method for forming a Wireless Personal Area Network (WPAN), wherein the determining step comprises detecting the return signals using multiple receivers as recited in claim 16.

The method for forming a Wireless Personal Area Network (WPAN), wherein the choosing step comprises choosing those PAN devices that are within a predetermined distance of each other as recited in claim 18.

The method for forming a Wireless Personal Area Network (WPAN), wherein the choosing step comprises choosing those PAN devices that move substantially as a group as recited in claim 19.

The method for forming a Wireless Personal Area Network (WPAN), wherein the choosing step comprises choosing those PAN devices that are within a predetermined distance of each other and move substantially as a group as recited in claim 20.

The method for forming a Wireless Personal Area Network (WPAN), wherein the transmitting step comprises first transmitting to a remote relay and second transmitting from the remote relay to the subset of PAN devices as recited in claim 21.

Logan et al. from the same or similar fields of endeavor teaches a rule based methods and apparatus for generating notification messages based on the proximity of electronic devices to one another (see abstract). The method and apparatus comprises a server that determines the location of the mobile electronic devices (see column 6 lines 4-17). The server is connected to a relay device that is wirelessly coupled with a plurality of mobile devices, which are within a predetermined distance of each other (see column 7 lines 59-63 and column 2 lines 23-29). The mobile devices communicate with the relay station using a shorter range Bluetooth signal while the relay device communicates with the server using a longer range Bluetooth signal. Each mobile device acts as a receiver, which communicates with each other and the server to determine the location of each other (see column 5 lines 47-67 and figure 2). This is accomplished with the use of radio frequency identification (RFID) tags (see column 7 lines 28-35). The server communicates with select mobile devices by first transmitting.to the remote relay device and then from the remote relay device to the mobile devices (see column 5 lines 47-

67 and column 6 lines 1-3). Thus, it would have been obvious to the person of ordinary skill in the art at the time of the invention to use the server, relay device, and mobile devices as taught by Logan et al. with the Wireless Personal Area Network (WPAN) as taught by Chadha. The server, relay device, and mobile devices can be implemented by inserting a long range Bluetooth device as taught by Logan et al. between the location server and PAN devices taught by Chadha. The long range Bluetooth transceiver will function as a relay device, which, passes along location information. The motivation for using the server, relay device, and mobile devices as taught by Logan et al. with the Wireless Personal Area Network (WPAN) as taught by Chadha is to allow users of the network to define conditions and actions in response to the relative positions of the various mobile devices.

4. Claims 6 and 22-23 are rejected under 35 U.S.C. 103(a) as being unpatentable over Chadha (U.S. Patent Application Publication 2004/0176107) and Logan et al. (U.S. Patent 6,996,402) as applied to claims 1 and 21 above, and further in view of Trossen et al. (U.S. Patent Application Publication 2005/0059410).

For claims 6 and 22-23, Chadha and Logan et al. disclose all the subject matter of the claimed invention with the exception wherein the first transmitting step between the location server and the remote relay comprises a wireline link. Trossen et al. from the same or similar fields of endeavor teaches a system and method for providing differential location services comprising a wireless access point connected to the network through a wireline link (see paragraph 23 and figure 1). Thus, it would have been obvious to the person of ordinary skill in the art at the time of the invention to use the access point with a wireline connection in the

Wireless Personal Area Network (WPAN) as taught by Chadha and Logan et al. The access point as taught by Trossen et al. can be implemented by configuring the access point to support Bluetooth and communicate between the mobile devices and server as taught by Logan et al. The motivation for using the system and method for providing differential location services comprising a wireless access point as taught by Trossen et al. is to provide specific services based upon the user's present geographic location.

Conclusion

5. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. Graumann (U.S. Patent Application Publication 2005/0135292) and McCall et al. (U.S. Patent 6,738,628) are cited to show subject matter that is considered pertinent to the claimed inventions.

6. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Ben H. Liu whose telephone number is (571) 270-3118. The examiner can normally be reached on Monday Through Friday 7:30AM to 5:00PM EST.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Dang Ton can be reached on (571) 272-3171. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

BL

DANG T. TON
SUPERVISORY PATENT EXAMINER